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September 10, 2018

VIA ECFS AND HAND DELIVERY

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: GN Docket No. 15-319

Dear Ms. Dortch:

Comsearch submits the attached Proposal for Initial Commercial Deployment that contains highly confidential information.

A redacted version of the proposal is being filed electronically through the Commission's Electronic Comment Filing System. In addition, one copy of the confidential version of the notice is being delivered to the Office of the Secretary. Electronic versions (e-mail) of the proposal are being sent to Paul Powell, Navid Golshahi and Kamran Etemad of the Wireless Telecommunications Bureau and Julius Knapp of the Office of Engineering and Technology.

Please feel free to contact me if you should have any questions or if you require any additional information.

Respectfully Submitted,

/s/ H. Mark Gibson

H. Mark Gibson
Director, Regulatory Policy
CommScope
19700 Janelia Farm Boulevard
Ashburn, Virginia 20147

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Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band	)	GN Docket No. 15-319
	)	DA 18-783

Re: CommScope Proposal for Initial Commercial Deployment (GN Docket 15-319)

To: Marlene H. Dortch
Office of the Secretary, Federal Communications Commission

COMMSCOPE PROPOSAL
For
CBRS INITIAL COMMERCIAL DEPLOYMENT

In response to FCC inquiry in the above-captioned proceeding[1], CommScope hereby submits our proposal for CBRS Initial Commercial Deployment (ICD).

Introduction

CommScope welcomes the opportunity to submit our proposal to conduct several trials in support of our ICD. We note that this is a significant milestone in the development for the

[1] See *Wireless Telecommunications Bureau and Office of Engineering and Technology Establish Procedure and Deadline for Filing Spectrum Access System (SAS) Administrator(s) and Environmental Sensing Capability (ESC) Operator(s) Applications*, GN Docket No. 15-319 (DA 15-1426) (Public Notice) *30 FCC Rcd 14170* (2015), *Report and Order And Second Further Notice of Proposed Rulemaking*, (Order) GN Docket No. 12-354, 30 FCC Rcd 3959, 80 FR 34119 (2015), and DA 18-783 (ICD PN)

Citizens Broadband Radio Service (CBRS) representing substantial effort across the industry. We urge the Commission to review and approve our report as quickly as possible and publicly announce that CommScope has successfully completed ICD and will receive final certification to operate our SAS.

CommScope ICD Proposal

CommScope proposes to meet the ICD requirements of the PN by conducting a series of trial deployments with several commercial partners at several locations. Our trial partners and locations were chosen to maximize the opportunity to demonstrate compliance with the test requirements. All ICD trials will last for a minimum of 30 consecutive days and involve a variety of testing scenarios featuring multiple CBSDs that result in the generation of data upon which the Commission can reasonably predict that the CommScope SAS will operate reliably in compliance with the Commission's rules.

Complete details on our proposed ICD trials are provided in Appendix A.

Our basic test plan for ICD consists of the following:

1. **User Registration Process.** The process by which users can register with the SAS, receive authentication, and obtain user IDs during ICD.
    - CommScope will demonstrate the user registration process via the following steps:
        - A CommScope administrator will create a verified user account in the SAS User Interface (UI). This will include entering user contact data (e.g. e-mail), as well as setting group and access privilege levels.
        - The user will be sent an e-mail notification with a link and temporary password for full registration and verification.

- The user will access the provided link, use the temporary password to login, select a new password conformant with strong password rules, and enter remaining registration information.

- **ICD Report**: Screen shots of SAS UI and e-mail illustrating the process steps performed.

2. **SAS-CBSD Communications.** The processes that the SAS will follow to communicate with and manage multiple CBSD and/or Domain Proxy (DP) products, including the protocols for SAS-CBSD communications for registration, channel grant, and channel release.
   - CommScope will demonstrate SAS-CBSD Communications using CBSDs installed at field sites described in Appendix A and connecting to the CommScope SAS utilizing secure Internet links to our cloud network services provider.
   - All messaging will be encrypted using TLS/SSL with PKI certificate validation.
   - One or more CBSDs from one or more CBSD vendors installed at different locations as described in Appendix A will connect to the SAS. Some of these CBSDs may connect to SAS via a domain proxy (DP). All CBSDs and DPs will exercise the WInnForum Release 1.2 SAS-CBSD protocol including:
     - Sending a registration request and receiving a registration response
     - Sending a spectrum inquiry request and receiving a spectrum inquiry response
     - Sending a grant request and receiving a grant response
     - Sending a heartbeat request and receiving a heartbeat response.
     - Sending a relinquishment request and receiving a relinquishment response
     - Sending a deregistration request and receiving a deregistration response

- **ICD Report**: SAS and CBSD log file snippets detailing the message exchange (as available).

3. **Professional Installation.** The process that a certified professional installer (CPI) will follow to register CBSDs/DPs.
    - CommScope will demonstrate the process used by an authorized CPI user for entering installation parameter data into the SAS. This will involve two cases, one of the CPI entering data via the SAS UI, and secondly via CPI signed data sent directly by the CBSD to the SAS. In each case the CPI validity will be verified against the WInnForum CPI database if available. If the CPI database is not available, CommScope will simulate the CPI database for demonstration of the CPI verification.
    - CommScope expects CPIs to utilize either the geolocation capabilities inherent in the CBSD or an appropriate alternative consistent with WInnForum specification WINNF-TS-0112-V1.4.1, R0-DEV-02 (a) to accurately locate the CBSD. The SAS will verify the location data is in the required format and within US borders.
    - In the case of the CPI entering installation data directly into the SAS UI, two cases will be generated:
        - CPI data entry prior to CBSD registration
        - CPI data entry post CBSD Registration
        - Our ICD Report will contain screen shots of the UI and log file snippets demonstrating validation and acceptance of the data and successful CBSD registration.
    - If supported by the CBSD, the second CPI use case will demonstrate the CBSD sending CPI-signed installation parameter data in the registration request message to

the SAS and the SAS accepting the registration of the CBSD once the data and CPI user is verified.

- **ICD Report**: Log file snippets of the signed CPI data and registration request and response sequence.

4. **SAS-SAS Interoperability.** Ability to correctly synchronize and exchange information with other SASs and correctly apply information security procedures and incumbent protection methods during ICD.
   - CommScope will work with at minimum Amdocs, Google and Sony to demonstrate SAS-SAS Interoperability.
   - CommScope will demonstrate CPAS execution as a regularly scheduled process. As part of CPAS, the SAS will create a full activity dump and synchronize this data with all connected peer SAS's over a secure link. Following data synchronization, the CommScope SAS will store and utilize the peer SAS data for IAP calculations.
   - **ICD Report**: Screen shots and log file snippets of data being exchanged with one or more peer SAS's.
5. **SAS Utilization of Commission Databases.** Access, read, and use data directly from FCC databases during ICD, pending database availability.
   - CommScope will demonstrate CPAS execution as a regularly scheduled process which will include synchronization of commission databases as they are available.
   - **ICD Report**: Screen shots and log file snippets of synchronization with commission databases and any data being updated or added to the SAS database.
6. **DPA Protection.** CommScope's SAS system will be DPA-enabled. Accordingly, we will demonstrate the ability to implement notification-based DPA protection using a portal.

- CommScope will provide a declaration of our ESC capabilities along with details of our ESC sensor network buildout.
- CommScope plans to deploy CBSDs in at least one portal-DPA region. Assuming the portal DPA interface is available, we will demonstrate CBSD grant suspension when the portal DPA is activated. Portal activation will be coordinated with the relevant DPA owner/user.
- **ICD Report**: Screenshots of the portal UI and log file snippets demonstrating the SAS CBSD grant suspension.

7. **Incumbent Protection Implementation.** Implementation of all relevant interference protection criteria, including how over-the-air propagation testing will address the protection of Fixed Satellite Service (FSS) earth station sites, federal inland radar test sites, and area-based protections (e.g., Grandfathered Wireless Protection Zones).
   - CommScope plans to deploy CBSDs for ICD in areas near FSS and GWPZ incumbents. This operation will be coordinated with incumbents as necessary. In the event protection cannot be demonstrated from a live CBSD for a particular incumbent type, the incumbent will be simulated. In either event, CommScope will demonstrate that the SAS has managed CBSD power and/or frequencies appropriately.
     - For an actual incumbent – CommScope will coordinate ICD operation with all potentially affected incumbents before conducting any live testing with CBSDs. For more information, please refer to trial-specific details in Appendix A.

- For a simulated incumbent – aggregate RF signal power will be measured at the physical location of the simulated incumbent and the measurement adjusted for incumbent antenna parameters.

- **ICD Report**: Communications from live incumbents confirming no CBRS impact to incumbent activity and/or screen shots and signal measurement calculations from any simulated incumbent.

8. **Interference Reports and Mitigation.** The proposed real-world interference mitigation demonstration and the performance of the reporting requirement.
   - CommScope plans to deploy CBSDs for ICD in areas near FSS and GWPZ incumbents. We have no plans on intentionally generating interference into these incumbents and therefor will not provide a live demonstration of actual interference reports.
   - CommScope will provide a detailed description of our Interference Reporting and Mitigation process and include any industry developed interference reporting tools.
   - **ICD Report**: Detailed description as well as screen shots of simulated interference reports as applicable.

As soon as possible after completion of our ICD trials, CommScope will submit our report to the Commission detailing each of the tests actual 1-8 above and providing the data and test results. To the extent applicable, our report will document any public feedback as well as our responses.[2]

[2] Albeit for a different purpose, for an example of a similar report, see our TV White Space Database Trial Final Report, June 11, 2014 https://ecfsapi.fcc.gov/file/7521300925.pdf.

Conclusion

CommScope is pleased to submit our proposal for our CBRS Initial Commercial Deployment trials. We note that details of our trials are still in development. Accordingly, we intend to file updates to this report as details become available.

Upon receipt of our final report, we urge the Commission to review and approve our report as quickly as possible and publicly announce that CommScope has successfully completed ICD and will receive final certification to operate our SAS.

Respectfully Submitted,

/s/ H. Mark Gibson

H. Mark Gibson
Director, Regulatory Policy
CommScope
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Appendix A: Details of ICD Trials

END